APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/032,967	10/26/2001	Earl D. Cox	01-PAN-04	8713

7590	05/06/2005

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EXAMINER
HIRL, JOSEPH P

ART UNIT	PAPER NUMBER
2129	

DATE MAILED: 05/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	10/032,967	COX, EARL D.
	Examiner	Art Unit	
	Joseph P. Hirl	2129	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>31 March 2005</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1,4-10,12-18 and 21-36</u> is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1,4-10,12-18 and 21-36</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>26 October 2001</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1.   This Office Action is in response to an AMENDMENT entered February 1, 2005

for the patent application 10/032,967 filed on October 26, 2001.

2.   All prior office actions are fully incorporated into this Office Action by reference.

Status of Claims

3.   Claims 1, 12, 17, and 31 are amended. Claims 1, 4-10, 12-18, and 21-36 are

pending.

Claim Rejections - 35 USC § 102

4.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by
> another filed in the United States before the invention by the applicant for patent or (2) a patent
> granted on an application for patent by another filed in the United States before the invention by the
> applicant for patent, except that an international application filed under the treaty defined in section
> 351(a) shall have the effects for purposes of this subsection of an application filed in the United States
> only if the international application designated the United States and was published under Article 21(2)
> of such treaty in the English language.

5.   Claims 1, 4-10, 12-18, and 21-36 are rejected under 35 U.S.C. 102(e) as being

anticipated by Zager et al (U.S. Pub 2002/0022952 referred to as **Zager**).

Claims 1, 12, 17

Zager anticipates instantiating, in a computer memory, the behavior expert, the

behavior expert having a plurality of memory locations and computer instructions

(**Zager**, p 0067; 0072; Examiner's Note (EN): model contains the behavior expert);

obtaining said operational information from at least one data provider connected to said

infrastructure component, said operational information providing values for a set of

variables that are used to define the performance of said infrastructure component

(**Zager**, p 0083; EN: p 13 applies); transforming zero or more states, according to a set

of metric rules, based on the values of said set of variables (**Zager**, p 0072; p 0092;

p0108; p0110; p0118; p 0199-204; EN: p 13 applies; a software agent is a behavior

expert; metric and quantitative are synonymous; state changes occur in the direct graph

of faults); generating zero or more events, indicating the performance of said

infrastructure component, according to a set of behavior rules, employed by said

behavior expert, based on said states transformed by said transforming (**Zager**, p 0072;

p 0092; p0108; p0110; p0118; p 0199-204; p 0151 EN: p 13 applies; a software agent is

a behavior expert; metric and quantitative are synonymous; state changes occur in the

direct graph of faults); reporting the events (**Zager**, p 0072); and performing adaptive

feedback control of the infrastructure component, based on the states. (**Zager**, p 0092;

p 0322-0331; EN: passing messages to other services in the system and receiving

messages in return is adaptive feedback; self-scheduling within the Agent Manager

represents control; see Fig. 1 for related ports; see p 0092 for model consisting of

many MO's related to different dependent behavior expert systems; relationships that

cross divisional lines establish the concept of "public" that is well established and
inherent in the prior art of Zager).

Claims 4, 21, 29, 30

Zager anticipates each of said metric rules includes an if-then condition (**Zager**, p
0317); wherein said if-condition includes at least one of a quantitative condition
expressed as at least one relation between a variable and its corresponding quantitative
value (**Zager**, p 0196 – p 0199; EN: p 13 applies; to one of ordinary skill in the art,
packet loss rate will be a quantitative condition expressed as packets input, packets
output over time t); a qualitative condition expressed as at least one relation between a
variable and its corresponding qualitative value (**Zager**, p 0196 – p 0199; EN: p 13
applies; to one of ordinary skill in the art, condition of managed resources such as
network A terminated load to network B); and a combination of quantitative and
qualitative condition which includes at least one quantitative condition and at least one
qualitative condition (**Zager**, p 0196 – p 0199; EN: p 13 applies; agent infers the
condition of managed resource by retrieving system management metrics from the
control blocks of the relevant OS).

Claims 5, 22

Zager anticipates quantitative value includes at least one of a numerical value, a
Boolean value, and a string value (**Zager**, p 0199; EN: "system management metrics").

Claims 6, 23

Zager anticipates qualitative value includes a specificity term represented by a
fuzzy set (**Zager**, p 0297; EN: p 13 applies; cardinality relationships are fuzzy).

Claims 7, 24

Zager anticipates declaring zero or more elements of said behavior expert as

public elements so that said elements can be accessed by different behavior experts

(**Zager**, p 0286; EN: p 20 applies; many-to-many); and specifying zero or more different

behavior experts as the dependencies of said behavior expert so that the elements

declared by said different behavior experts as public elements can be accessed by said

behavior expert (**Zager**, p 0286; EN: p 13 applies; many-to-many).

Claims 8, 13, 25

Zager anticipates said elements include at least one of a state, an event, and a

fuzzy set (**Zager**, p 0036).

Claims 9, 14, 26

Zager anticipates the step of the behavior expert reporting events includes

forming a uniform event representation for said events, in accordance with a standard

format (**Zager**, p 0033); and posting said uniform event representation of said events in

an event pool (**Zager**, p 0047; EN: p 13 applies; a database is an event pool).

Claim 10

Zager anticipates at least one data provider includes at least one of a service, an

operating system, an application, an external transaction, a network, and a additional

behavior expert (**Zager**, p 0042; 0092; EN: model consists of MO's).

Claims 15, 27

Zager anticipates standard format includes a uniform data model (**Zager**, p 0034;

EN: p 13 applies; a flexible model will uniformly represent the system).

Claims 16, 28

Zager anticipates event pool includes a blackboard (**Zager**, p 0031; EN: p 13

applies; to one of ordinary skill in the art, the blackboard concept is synonymous with

commonality to include "a solution").

Claim 18

Zager anticipates at least one data provider includes at least one of a service, an

operating system, an application, an external transaction, a network, and a behavior

expert (**Zager**, p 0042; EN: p 13 applies; EN: Fig. 1 represents an operating system, an

application, an external transaction, a network, and agent software providing data).

Claim 31

Zager anticipates a plurality of behavior experts wherein each behavior expert

includes an array of one or more internal states which are assigned values by said

behavior expert such that different internal states contain information collected at

different times (**Zager**, p 0035; EN: p 13 applies); and a plurality of bi-directional

linkages between said behavior expert systems wherein each behavior expert system

has access to the internal states of other behavior expert systems within the plurality,

forming a specific topology of linked behavior experts (**Zager**, p 0297).

Claim 32

Zager anticipates each behavior expert transforms its own internal states,

according to a set of metric rules, based on the internal states within said behavior

expert and one or more internal states of one or more other behavior experts within the

plurality of behavior experts (**Zager**, p 0151, 0152).

Claim 33

Zager anticipates each behavior expert generates events, according to behavior rules, based on the internal states within said behavior expert and one or more internal states of one or more other behavior experts within the plurality (**Zager**, p 0151, 0152).

Claim 34

Zager anticipates each behavior expert operates at an independent execution frequency (**Zager**, p 0150; EN: at their discretion is synonymous with independent execution frequency).

Claim 35

Zager anticipates the bi-directional linkages between the behavior experts are changed dynamically (**Zager**, p 0244; EN: the agents are dynamic, have bi-directional linkages and it follows that linkages are altered).

Claim 36

Zager anticipates the operation of the infrastructure component changes, select behavior experts within the plurality are dynamically instantiated or destroyed (**Zager**, p 0244).

Response to Arguments

6.   Applicant's arguments filed on March 31, 2005 related to Claims 1, 4-10, 12-18, and 21-36 have been fully considered but are not persuasive.

In reference to Applicant's argument:

Applicant respectfully traverses the rejection of independent claim I and requests reconsideration. Claim 1, as amended, is allowable over Zager in that it recites "performing adaptive feedback control of the infrastructure component, based on the states." Nothing in Zager teaches or suggests at least this feature of the claimed invention. Applicant notes the Examiner's response regarding the "non" condition, and hereby amends the claim.

Applicant respectfully traverses the rejection of independent claim 12 and requests reconsideration. Independent claim 12, as amended, is allowable over Zager in that it recites "performing adaptive feedback control of said infrastructure component." Nothing in Zager teaches or suggests at least this feature of the claimed invention.

Applicant respectfully traverses the rejection of independent claim 17 and requests reconsideration. Claim 17, as amended, is allowable over Zager in that it recites "implementing an adaptive feedback control of the infrastructure component, based on said states." Nothing in Zager teaches or suggests at least this feature of the claimed invention. Applicant notes the Examiner's response regarding the "non" condition, and hereby amends the claim.

Applicant respectfully traverses the rejection of independent claim 31 and requests reconsideration. Independent claim 31, as amended, is allowable over Zager in that it recites "performing adaptive feedback control of said infrastructure component." Nothing in Zager teaches or suggests at least this feature of the claimed invention.

Examiner's response: Para 10. below applies. The concept of implementing adaptive control of the infrastructure is represented in Zager @ p 0322-0331 by passing messages to other services in the system and receiving messages in return and self-scheduling within the Agent Manager; such is adaptive feedback and control.

Examination Considerations

7.　　The claims and only the claims form the metes and bounds of the invention. "Office personnel are to give the claims their broadest reasonable interpretation in light of the supporting disclosure. *In re Morris,* 127 F.3d 1048, 1054-55, 44USPQ2d 1023, 1027-28 (Fed. Cir. 1997). Limitations appearing in the specification but not recited in

the claim are not read into the claim. *In re Prater*, 415 F.2d, 1393, 1404-05, 162 USPQ 541, 550-551 (CCPA 1969)" (MPEP p 2100-8, c 2, l 45-48; p 2100-9, c 1, l 1-4). The Examiner has full latitude to interpret each claim in the broadest reasonable sense. Examiner will reference prior art using terminology familiar to one of ordinary skill in the art. Such an approach is broad in concept and can be either explicit or implicit in meaning.

8.   Examiner's Notes are provided to assist the applicant to better understand the nature of the prior art, application of such prior art and, as appropriate, to further indicate other prior art that maybe applied in other office actions. Such comments are entirely consistent with the intent and spirit of compact prosecution. However, and unless otherwise stated, the Examiner's Notes are not prior art but a link to prior art that one of ordinary skill in the art would find inherently appropriate.

9.   Unless otherwise annotated, Examiner's statements are to be interpreted in reference to that of one of ordinary skill in the art. Statements made in reference to the condition of the disclosure constitute, on the face of it, the basis and such would be obvious to one of ordinary skill in the art, establishing thereby an inherent prima facie statement.

10.   Examiner's Opinion: Paras 7-9 apply. The Examiner has full latitude to interpret each claim in the broadest reasonable sense.

Conclusion

11.   Claims 1, 4-10, 12-18, and 21-36 are rejected.

Correspondence Information

12.   Any inquiry concerning this information or related to the subject disclosure

should be directed to the Examiner, Joseph P. Hirl, whose telephone number is

(571) 272-3685. The Examiner can be reached on Monday – Thursday from

6:00 a.m. to 4:30 p.m.

If attempts to reach the Examiner by telephone are unsuccessful, the

Examiner's supervisor, Anthony Knight can be reached at (571) 272-3687.

Any response to this office action should be mailed to:

Commissioner of Patents and Trademarks,

Washington, D. C. 20231;

or faxed to:

(703) 872-9306 (for formal communications intended for entry);

or faxed to:

(571) 273-3685 (for informal or draft communications with notation of

"Proposed" or "Draft" for the desk of the Examiner).

Information regarding the status of an application may be obtained from the

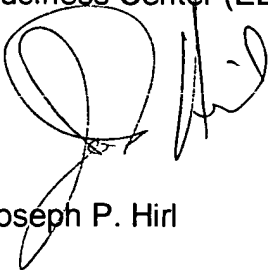Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

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you have any questions on access to Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll free).

Joseph P. Hirl

May 3, 2005